DEVELOPING LEADERS FOR THE THIRD GENERATION SINGAPORE ARMY:
A TRAINING AND EDUCATION ROADMAP

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fulfillment of the requirements for the
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MASTER OF MILITARY ART AND SCIENCE
General Studies

by

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The Singapore Army is transforming towards a Third Generation fighting force to meet the challenges of the contemporary security environment. As part of this transformation, the Singapore Army needs to review the training and education roadmap of its officers to develop the adaptive leaders required for full spectrum operations. Emphasis must be given to strengthen the professional military education, and develop the intellectual capacity, military ethics, and knowledge of the military profession of the officers. To this end, the Singapore Army needs to establish a singular doctrinal concept that defines the profession of arms in the Singapore context. Various initiatives can be considered to enhance the leadership development of its officers, including the promotion of self-education, unit education program, participation in inter-ministry/agency work attachments and multinational exercises, active management of the civilian education of the military officers, infusion of appropriate levels of broad liberal education at various stages of the military career, continual and high-level emphasis on critical and creative thinking and military ethics, and leveraging on partnerships with established institutions of higher learning to deliver the content for these subjects.

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ABSTRACT

DEVELOPING LEADERS FOR THE THIRD GENERATION SINGAPORE ARMY:
A TRAINING AND EDUCATION ROADMAP, by Major Tiong Keat Tan, 77 pages.

The Singapore Army is transforming towards a Third Generation fighting force to meet the challenges of the contemporary security environment. As part of this transformation, the Singapore Army needs to review the training and education roadmap of its officers to develop the adaptive leaders required for full spectrum operations. Emphasis must be given to strengthen the professional military education, and develop the intellectual capacity, military ethics, and knowledge of the military profession of the officers. To this end, the Singapore Army needs to establish a singular doctrinal concept that defines the profession of arms in the Singapore context. Various initiatives can be considered to enhance the leadership development of its officers, including the promotion of self-education, unit education program, participation in inter-ministry/agency work attachments and multinational exercises, active management of the civilian education of the military officers, infusion of appropriate levels of broad liberal education at various stages of the military career, continual and high-level emphasis on critical and creative thinking and military ethics, and leveraging on partnerships with established institutions of higher learning to deliver the content for these subjects.

ACKNOWLEDGMENTS

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ACRONYMS

2PDF	2nd People's Defense Force
AKO	Army Knowledge Portal
CF	Canadian Forces
CGSC	Command and General Staff College
CLD	Centre of Leadership Development
GBU	Guided Bomb Unit
HADR	Humanitarian Assistance and Disaster Relief
IDF	Israeli Defense Force
IDHQ	Island Defense Headquarters
ILE	Intermediate Level Education
LCM	Leadership Competency Model
NS	National Service
PGM	Precision Guided Munitions
SAF	Singapore Armed Forces
SAFTI IM	Singapore Armed Forces Training Institute Military Institute
U.N.	United Nations
U.S.	United States

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CHAPTER 1

INTRODUCTION

The Singapore Armed Forces in the Contemporary Operating Environment

Small states are by their nature weak and vulnerable. Sometimes it seems as if
small states were like small boats pushed out into a turbulent sea, free in one
sense to traverse it; but, without oars or provisions, without compass or sails, free
also to perish. Or, perhaps, to be rescued and taken aboard a larger vessel.[1]

The words of Sir Shridath Ramphal, former Secretary General of the

Commonwealth, can be used to describe Singapore at its independence in 1965. Then, the

fledging nation had a total defense capability of only two under-strength infantry

battalions, and was highly vulnerable to both internal and external security threats in a

hostile regional environment. The Singapore government recognized the need for a strong

and credible defense force to ensure the survival, security, and success of the young

nation. Thus, in 1967, National Service (NS)--a system of universal conscription--was

introduced to rapidly build up the country's defense capability.

Since then, the Singapore Armed Forces (SAF) has grown and developed into one

of the most technologically advanced military forces in Southeast Asia. While its core

mission remains the defense of Singapore's sovereignty and territorial integrity, the SAF

is increasingly called upon to undertake a wider spectrum of operations, including United

Nations (U.N.) peacekeeping missions in places such as Namibia (1989), Kuwait (1991-

2003), Cambodia (1992-1993), and Timor Leste (1999 to 2002).[2] In the aftermath of the

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[1]Ivelaw Lloyd Griffith ed., *Caribbean Security in the Age of Terror: Challenge
and Change* (Kingston, Jamaica: Ian Randle Publishers Ltd, 2004), 7.

[2]Singapore Ministry of Defence, "Peacekeepers: In the Service of Peace,"
http://www.mindef.gov.sg/peacekeepers/timeline.htm (accessed 1 October 2009).

11 September 2001 terrorist attacks on the United States (U.S.), the SAF further

expanded its mission profile to play an integral role in operations both at home and

abroad. Efforts include the establishment of the Island Defense Headquarters (IDHQ) by

the Singapore Army's 2nd People's Defense Force (2PDF) to work closely with the

police and civil defense agencies on matters of homeland security, and medical and

engineer construction contributions in Afghanistan as part of international efforts against

terrorism. In recent years, the SAF also participated actively in Humanitarian Assistance

and Disaster Relief (HADR) operations such as the tsunami relief efforts in Indonesia and

Thailand in 2004, Hurricane Katrina relief efforts in New Orleans, U.S. in 2005, and the

Yogyakarta earthquake relief efforts in Indonesia in 2006.

To meet the challenges of the highly volatile, uncertain, complex, and ambiguous

contemporary security environment,[3] the SAF formally announced its efforts to transform

into a Third Generation fighting force in 2003. The Third Generation SAF will operate

across a full spectrum of operations and possess the capabilities to "fight decisively in

war and respond flexibly in peacetime for counter-terrorism, peacekeeping, and

humanitarian aid."[4] To support the transformation effort, the SAF established the Centre

of Leadership Development (CLD) to train "effective and adaptive leaders who are able

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[3]Singapore Armed Forces Centre of Leadership Development, "Military Ethics and the Profession of Arms in the 21st Century" (Proceedings Papers: SAFTI MI 10th Anniversary Distinguished Speaker's Series, 2005), 3.

[4]Singapore Ministry of Defence, "The 3rd Generation SAF," http://www.mindef.gov.sg/imindef/mindef_websites/ topics/3g/home.html (accessed 1 October 2009).

to influence their men to operate under the most challenging circumstances under a wider

spectrum of operations."[5]

Leaders and their Roles in the Third Generation
Singapore Armed Forces

Third Generation SAF officers must be prepared for a wider spectrum of
operations. They will have to operate with other national security and civil
agencies, with coalition partners, with non-governmental organizations, and all
this in the glare of the global media. Third Generation SAF officers must
therefore be more Joint and integrated in outlook and thinking. They must also be
prepared to experiment with new ideas, technology, and operational concepts.
They must be able to think and act independently, understanding the objective,
and exercising initiative in self-directed, self-synchronizing operations.[6]

Strong and capable leadership determines the success or failure of the SAF in the

contemporary security environment. The SAF defines leadership as "a process of

influencing others to accomplish the mission, inspiring their commitment, and improving

the organization."[7] Likewise, the U.S. Army defines leadership as "the process of

influencing people by providing purpose, direction, and motivation while operating to

accomplish the mission and improving the organization."[8] Beyond this similarity in

definition, both armies recognize the increasing and exacting demands on military

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[5]Singapore Ministry of Defence, "Speech by Mr Teo Chee Hean, Minister for
Defence, at SAFTI MI 10th Anniversary Dinner, 25 August 2005,"
http://www.mindef.gov.sg/imindef/news_and_events/nr/2005/aug/25aug05_nr2/
25aug05_speech2.html (accessed 1 October 2009).

[6]Ibid.

[7]Singapore Armed Forces Centre of Leadership Development, "Definition of
Leadership," http://www.mindef.gov.sg/imindef/mindef_websites/atozlistings/
saftimi/units/cld/keyideas/leadership.html (accessed 1 October 2009).

[8]Department of the Army, Field Manual (FM) 6-22, *Army Leadership:
Competent, Confident, and Agile* (Fort Monroe, VA: U.S. Army Training and Doctrine
Command, 2006), 1-2.

officers as leaders in full spectrum operations. These officers are expected to be warriors, as well as intellectually flexible and agile in order to lead military forces to perform all possible missions across the spectrum of operations, often at a moment's notice.[9] In addition to traditional combat operations, officers have to be prepared to undertake a greater diversity of roles, including state-building, security sector reform, mentoring and training indigenous security forces, humanitarian assistance, civil administration, law enforcement, exercising political muscle, and even social work.[10] To meet the demands of full spectrum operations, the Third Generation SAF requires leaders that are "highly adaptive, innovative, and able to cope well with uncertainty and change."[11] Likewise, these leadership attributes are reflected in the U.S. Army's model of a leader of "character, presence, and intellectual capacity."[12]

To groom the officers for the Third Generation fighting force, the SAF developed a new leadership framework called the "SAF Leadership 24-7" (see figure 1) in 2002. The framework identifies four major aspects of leadership to be focused on as part of the formal leadership training system, and recognizes the importance of the leadership context as part of the leadership education. In 2003, the SAF implemented the Leadership

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[9]Charles Heller and Ted Thomas, "A Clash of Cultures: The Challenge of Educating Scholar Warriors for an Age of Persistent Conflict in Uncertain Environments," *International Leadership Association Member Connector* (July/August 2008): 4-6.

[10]John Kiszely, "Post-Modern Challenges for Modern Warriors," *The Shrivenham Papers*, no. 5 (December 2007), 7-8.

[11]Kim Yin Chan, Sukhmohinder Singh, Regena Ramaya, and Kwee Hoon Lim, SAFTI Military Institute, *Spirit and System: Leadership Development for a Third Generation SAF* (Singapore: Centre of Leadership Development, 2005), 2.

[12]Department of the Army, 2-4.

Competency Model (LCM) (see figure 2) to realize the "competency" component of the framework, and to provide greater emphasis on skills that are vital in the new operating environment. These skills include decision-making, ethical reasoning, coaching, team building, organization development, feedback, reflection, personal mastery, and self management in the Third Generation operating context.[13]

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[13]Chan, Singh, Ramaya, and Lim, SAFTI Military Institute, 69-73.

The circle and the triangle in Figure 1 provide a heuristic for thinking and talking about leadership in the SAF:

Triangle ('Building Blocks') The triangle provides a framework for specifying 'what SAF Leaders need' for effective leadership. The hierarchy of 'building blocks' says values must always form the basic foundation, upon which competencies and a full range of styles are best employed in leadership. The 'Self' (consisting of self-awareness, self-management and personal mastery) is most difficult to attain, and includes a good understanding of one's own values, competencies and styles. The hierarchy does not prescribe a sequence for development or imply that some 'building blocks' are more important than others.

Circle ('Leadership Context') The circle emphasises that SAF Leaders must influence people with a good understanding of the SAF's mission and purpose, the operating environment and desired outcomes. It is these three aspects of the 'leadership context' that shape the specific contents of the framework, i.e., the specific styles, competencies, and values desired in each Service or level of leadership in the SAF.

Circle and Triangle Together, the 'building blocks' (triangle) and 'leadership context' (circle) spell out the scope of concerns of LD system in the SAF. In other words, when we think of 'LD in the SAF', it includes education and training in the domain of values, competencies, styles and 'self'. All this must be done in cognisance of the mission and purpose of the SAF, the SAF's operating environment, and the desired outcomes.

Figure 1.   The SAF Leadership 24-7 Framework
Source: Kim Yin Chan, Sukhmohinder Singh, Regena Ramaya, and Kwee Hoon Lim, SAFTI Military Institute, *Spirit and System: Leadership Development for a Third Generation SAF* (Singapore: Centre of Leadership Development, 2005), 17-19.

The SAF LCM consists of five competency domains, of which four are 'core competencies' that directly affect leadership performance on the job, and the fifth competency domain is a 'personal meta-competency' required for leader adaptability and growth. The Table below shows the 5 competencies and 14 skills – all of which are common across the 3 Services of the SAF. Though common across the 3 Services, the 14 skills are differently described in terms of behavioural actions across the 3 Services at 3 conceptual levels of leadership in the organisation: the direct, organisational and strategic levels. These behavioural descriptors are intended to facilitate the assessment, observation, feedback and reflection on specific leadership competencies and skills in the SAF Schools and Units.

Competencies	"Core Competencies" (For Leader Performance)				"Meta-competency" (For Growth / Adaptability)
	Conceptual Thinking	Social	Mission	Developmental	Self
Skills	Critical Thinking	Communicating to Influence	Planning	Developing People	Self Awareness
	Creative Thinking	Interpersonal Effectiveness	Decision Making	Developing Team	Self Management
	Ethical Reasoning		Execution	Improving Organisation	Personal Mastery

Figure 2.   The SAF Leadership Competency Model (LCM)
Source: Kim Yin Chan, Sukhmohinder Singh, Regena Ramaya, and Kwee Hoon Lim, SAFTI Military Institute, *Spirit and System: Leadership Development for a Third Generation SAF* (Singapore: Centre of Leadership Development, 2005), 69-73.

Developing the Leaders of Tomorrow

I start with the premise that the function of leadership is to produce more leaders, not more followers.[14]

Much has been written in the general literature about what military leadership is

and the types of military leaders that are needed to operate in the contemporary security

environment. In comparison, relatively little has been discussed about how militaries

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[14]Time.com, "Leadership: The Biggest Issue," *Time*, 8 November 1976, http://www.time.com/time/magazine/article/0,9171,918484-6,00.html (accessed 1 October 2009).

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should develop these leaders. For example, the SAF has earlier established a model and

principles for systematic leadership development (see figure 3). The model identifies six

components that are important in thinking about leadership development from a system

process perspective. These components are the self, the environment, superiors and

instructors, peers, colleagues and subordinates, curriculum design, and developmental

tools and procedures.[15] However, the model fails to address the specifics and processes of

how to achieve each identified component.
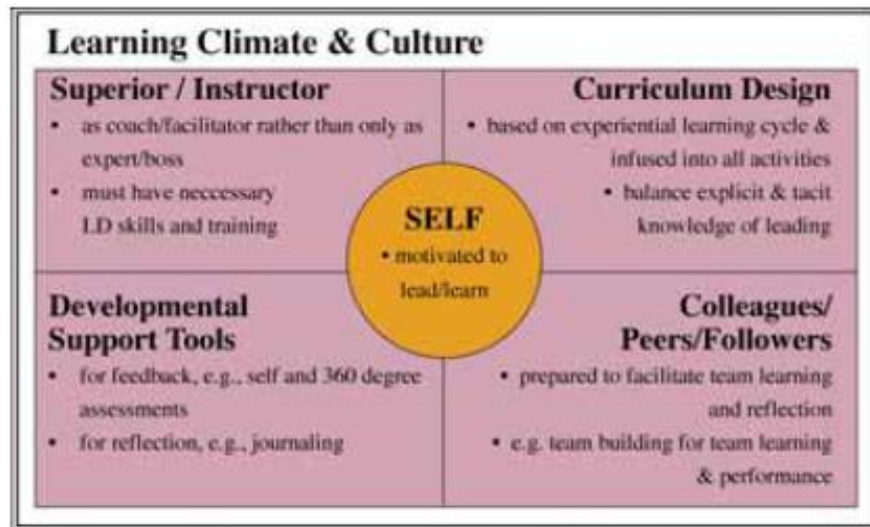
Figure 3.   Components of the SAF Leadership Development System.
Source: Kim Yin Chan, Sukhmohinder Singh, Regena Ramaya, and Kwee Hoon Lim,
SAFTI Military Institute, *Spirit and System: Leadership Development for a Third
Generation SAF* (Singapore: Centre of Leadership Development, 2005), 74-76.

A constructive way of thinking about the process of developing future military

leaders is arguably found in one of the guiding principles behind the curriculum design of

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[15]Chan, Singh, Ramaya, and Lim, SAFTI Military Institute, 74-76.

the U.S. Army Command and General Staff College (CGSC), "Training for certainty and educating for uncertainty."[16] This view was widely espoused by retired General Peter Schoomaker, the former U.S. Army Chief of Staff.[17] Lieutenant General Sir John Kiszely, the former Director of the Defense Academy of the United Kingdom, distinguishes the difference in the purposes of training and education. Training prepares leaders, both individually and collectively, for predictable and specific tasks in given circumstances, while education prepares leaders for the unpredictable and conceptual challenges. Specifically, education helps to develop the capacity for good judgment and political acumen, qualities which are in high demand in the contemporary security environment. Despite their differences, training needs to be founded on education in order for leaders to maintain the versatility and flexibility to adapt the training to changing circumstances. In addition, given that relatively junior officers can now be expected to exercise professional judgment and make very senior decisions during military operations, education should not be restricted to senior officers.[18]

<u>Thesis Overview: Developing Leaders for the Third
Generation Singapore Army</u>

Based on the dialectic between training and education, the primary research question for this thesis is to explore how the Singapore Army can design a training and

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[16]Command and General Staff College, "About the CGSC," http://www-cgsc.army.mil/principles.asp (accessed 1 October 2009).

[17]Brian Greenshields and Peter Gustaitis, "Naval Postgraduate School: Training Special Operations Personnel for Certainty; Educating for Uncertainty," *Special Warfare* (1 September 2008): 26.

[18]Kiszely, 14-19.

education roadmap to develop officers as leaders for the Third Generation fighting force. Leadership development of the officers is a significant and critical issue for two reasons. First, the officers play a pivotal role in determining the successful transformation of the Singapore Army into a Third Generation fighting force. As retired General Henry Shelton, the former U.S. Chairman of the Joint Chiefs of Staff, wrote, "Transformation is first and foremost an intellectual exercise, requiring the brightest minds actively engaged in taking our armed forces to new and higher levels of effectiveness . . . the road to transformation begins with a strong program of education and leader development."[19] Second, the demands on the Singapore Army officers have grown tremendously in the contemporary security environment. As shown earlier, officers are expected to be adaptive and innovative intellectual warriors, and equipped with the necessary skills to operate across the full spectrum of operations. However, the finite and limited length of the military career makes it an organizational and individual challenge to increase the amount of time devoted to the training and education of the officers, especially if this has to be done at the expense of operational deployment time.

This thesis examines the entire training and education roadmap of the Singapore Army officer and seeks to balance the various training, education, and operational demands. In order to answer the primary research question, this thesis explores three secondary research questions, namely the key qualities that the Singapore Army officers require in order to operate in the contemporary security environment, the benefits of

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[19]Henry H. Shelton, "Professional Education: The Key to Transformation," *Parameters* (Autumn 2001): 7.

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training vis-à-vis education in developing the desired qualities, and the need to balance the competing demands of training and education in developing these officers.

This thesis is organized in five chapters. Chapter 1 provides the introduction to the thesis, while chapter 2 reviews the existing literature to provide insights into the three key areas as identified in the secondary research questions. Chapter 3 explains the methodology, which adopts the model based on the qualitative differences between training and education, as described by retired General Peter Schoomaker and Lieutenant General Sir John Kiszely.

Based on the literature review and methodology established in chapters 2 and 3, chapter 4 analyzes and proposes a revised training and education roadmap that maps out the key leadership developmental milestones that officers should achieve throughout their career in the Singapore Army. This thesis argues that in spite of the high demands for operations and training within a finite and limited military career, the Singapore Army should dedicate more resources towards the education of its officers as the best way of developing the adaptive leaders for the contemporary security environment. To this end, this thesis explores various initiatives that the Singapore Army can consider to enhance the leadership development of its officers, including the promotion of self-education, unit education program, participation in inter-ministry/agency work attachments and multinational exercises, active management of the civilian education of the military officers, infusion of appropriate levels of broad liberal education at various stages of the military career, continual and high-level emphasis on critical and creative thinking and military ethics, and leveraging on partnerships with established institutions of higher learning to deliver the content for these subjects. Chapter 5 concludes this thesis by

offering possible alternatives to enhance the leadership development of the Singapore Army officer.

<u>Assumptions, Limitations, and Delimitations</u>

A key assumption of this thesis is that a typical regular officer in the Singapore Army officer enters service at the age of nineteen and retires at the age of forty-five. As such, the formal leadership development of the Singapore Army officers is constrained within this period of twenty-six years. Given the unique operational requirements of the different services, this thesis applies only to the officers from the army, and not to officers from the air force or navy who follow slightly different career paths. This thesis also does not apply to conscript officers who only serve two years full-time in the military, or to reserve officers who do not serve full-time in the military.

CHAPTER 2

LITERATURE REVIEW

This chapter reviews the existing literature to provide insights into three key

areas, namely the key qualities that the Singapore Army officers require in order to

operate in the contemporary security environment, the benefits of training vis-à-vis

education in developing the desired qualities, and the need to balance the competing

demands of training and education in developing these officers.

<u>Desired Qualities for the Third Generation</u>
<u>Singapore Army Officer</u>

The Third Generation Singapore Army is envisaged to operate across a full

spectrum of operations and possess the capabilities to "fight decisively in conventional

war and respond flexibly in peacetime for counter-terrorism, peacekeeping, and

humanitarian aid."[20] To support the transformation effort to a Third Generation fighting

force, the CLD was established to promote leadership excellence and spearhead

leadership development in the SAF. Specifically, the SAF seeks to train "effective and

adaptive leaders who are able to influence their men to operate under the most

challenging circumstances under a wider spectrum of operations."[21]

The contemporary security environment has been described as highly volatile,

complex, and ambiguous.[22] These characteristics of fog and friction should not appear

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[20]Singapore Ministry of Defence, "The 3rd Generation SAF."

[21]Singapore Ministry of Defence, "Speech by Mr Teo Chee Hean, Minister for Defense, at SAFTI MI 10th Anniversary Dinner, 25 August 2005."

[22]Singapore Armed Forces Centre of Leadership Development, "Military Ethics

alien to the educated military mind. Clausewitz, a renowned theorist of war, has earlier

described war as "the realm of chance, (which) makes everything more uncertain and

interferes with the whole course of events."[23] However, what is arguably new and more

challenging is that in the contemporary security environment, the conditions of

uncertainty, chance, friction, and complexity are aggravated not only by the diverse and

myriad operational missions across the full spectrum of operations, but also by an

increasingly lethal and adaptive enemy. In order to successfully mitigate the fog and

friction of the contemporary security environment,[24] research suggests that the Third

Generation Singapore Army officers need to develop three key qualities, namely

intellectual capacity, military ethics, and knowledge of the military profession.

Intellectual Capacity

> The skill of the officer is neither a craft (which is primarily mechanical) nor an art (which requires unique and nontransferable talent). It is instead an extraordinarily complex intellectual skill requiring comprehensive study and training.[25]

The first key quality that the Third Generation Singapore Army officers require to

operate in the fog and friction of the contemporary security environment is intellectual

capacity. Military officers are not only expected to be warriors, but also intellectually

flexible and agile in order to lead military forces to perform the diverse and myriad

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and the Profession of Arms in the 21st Century," 3.

[23]Michael Howard and Peter Paret, ed., *Carl Von Clausewitz: On War* (Princeton: Princeton University Press, 1989), 101.

[24]Singapore Armed Forces Centre of Leadership Development, "Military Ethics and the Profession of Arms in the 21st Century," 3.

[25]Samuel Huntington, *The Soldier and the State* (Cambridge, MA: Harvard University Press, 1957), 13.

missions across the full spectrum of operations, often at a moment's notice.[26] In addition

to traditional combat operations, officers have to be prepared to undertake a greater

diversity of roles, including state-building, security sector reform, mentoring and training

indigenous security forces, humanitarian assistance, civil administration, law

enforcement, exercising political muscle, and even social work.[27]

The need for intellectual capacity amongst military officers is not a new

phenomenon. Historically, intellectual military officers have often made the difference

between success and failure on the battlefield. During the interwar period, one of the

reasons why the Germans were more successful than the British in the development of

mechanized warfare was because of their army's cultural emphasis on the intellectual and

professional development of the officer corps. The German army officer corps was

dominated by members of the general staff who were selected by an extremely

competitive system that placed a high emphasis on professional military education,

intellectual attainment, as well as tactical and operational experience.[28] On the other

hand, the structure and cultural values of the British army discouraged intellectualism.

The Cardwell system, which required units at home and forces in the British empire to

match up on a one-to-one basis, was a strong inhibitor to innovation,[29] while the military

education system rarely stretched the mental faculties of the officers. Many Britons did

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[26]Heller and Thomas, 4-6.

[27]Kiszely, 7-8.

[28]Williamson Murray, "Armored Warfare," in Williamson Murray and Allan R. Millett, eds., *Military Innovation in the Interwar Period* (Cambridge: Cambridge University Press, 1996), 47-48.

[29]Ibid., 22.

not view soldiering as a serious profession that demanded intellectual dedication, and treated such efforts with disdain.[30]

The importance of intellectual capacity amongst military officers was again manifested during the Second Lebanon War in 2006, where the supposedly inferior Hezbollah militants achieved numerous operational surprises and successes against the vaunted Israeli Defense Force (IDF). Most of these successes were attributed to Hezbollah's ability to learn, innovate, and adapt new tactics to neutralize the strengths of the IDF. For example, Hezbollah constructed a previously unknown intricate network of underground caves and bunkers in Southern Lebanon, which was used to conceal and launch short-range rockets against Israel, as well as to neutralize the effectiveness of Israeli standoff weapons and force the IDF into unfavorable close combat conditions in urban terrain.[31] It is suggested that "Hezbollah leaders (had) studied the historical model of the Viet Cong as inspiration for establishing an advanced tunnel network, extending through the main avenues of approach into southern Lebanon."[32] Hezbollah also mastered new capabilities in the form of counter-signals intelligence and human intelligence to blunt the IDF's advantage, and stockpiled a larger arsenal of advanced weaponry than was known to the IDF.[33] This arsenal was employed to shrewd, inventive, innovative, and

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[30]Williamson Murray, "Armored Warfare," 22-24.

[31]Matt M. Matthews, The Long War Series Occasional Paper 26, *We Were Caught Unprepared: The 2006 Hezbollah-Israeli War* (Fort Leavenworth, KS: Combat Studies Institute Press, 2008), 16-21.

[32]Daniel Helmer, "Not Quite Counterinsurgency: A Cautionary Tale for the U.S. Forces Based on Israel's Operation Change of Direction," *Armor* (January-February 2007): 8.

[33]Matthews, 16-22.

devastating effect, as seen in the massive deployment of advanced anti-tank missiles against the Israeli Merkava tanks.[34]

Clausewitz emphasized the need for intellectual officers to lead operations when he wrote, "If the mind is to emerge unscathed from this relentless struggle with the unforeseen, two qualities are indispensible . . . *coup d' oeil* . . . and determination."[35] C*oup d' oeil*, which refers to the ability to see and understand what must be done, results from robust intellectual preparation, and is clearly demonstrated by the successes of U.S. Army General Petraeus with his 101st Airborne Division in Mosul, Iraq in 2003. Even though General Petraeus, who like other top military leaders in Iraq, had initially focused on fighting a war and not on rebuilding a society, he was able to successfully lead the 101st Airborne Division to numerous successes in rebuilding Mosul, due in large part to his intellectual qualities. In particular, his educational qualifications gave him a firm grounding in international relations and economics, while his experiences provided him with a good understanding of reconstruction operations, prepared him to work in an inter-agency environment, and familiarized him with the mechanics of multinational operations in a complex ethno-religious context.[36]

The intellectual demands of full spectrum operations are acknowledged by established militaries around the world. The SAF requires leaders that are "highly

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[34]Matthews, 64.

[35]Howard and Paret, 102.

[36]Kirsten Lundberg, "The Accidental Statesman: General Petraeus and the City of Mosul, Iraq," in *L200 Leadership Applied* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 2008), 77-83.

adaptive, innovative, and able to cope well with uncertainty and change,"[37] and the SAF

LCM lists conceptual thinking--which includes critical thinking, creative thinking, and

ethical reasoning--as a core competency for leader performance in the new operating

environment.[38] Likewise, these leadership attributes are reflected in the U.S. Army's

model of a leader of "character, presence, and intellectual capacity."[39] Despite all the

promises of technology, fog and friction remain as constants in the contemporary security

environment. To this end, intellectual capacity is critical to ensure that military officers

maintain the ability to outthink and outsmart the enemy and remain ahead of the enemy's

decision cycle.

Military Ethics

The second key quality that the Third Generation Singapore Army officers require

to operate in the fog and friction of the contemporary security environment is military

ethics. Ethics is one of the SAF's seven core values, and is defined as "exemplary

conduct and moral strength, enabling us to know what is right from wrong, and to do the

right thing both in peacetime and in war; a sense of loyalty and responsibility to one's

peers, subordinates, and leaders; and being honest and accurate in our reporting, having

integrity in our dealings with others, and not misusing our position against anyone."[40]

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[37]Chan, Singh, Ramaya, and Lim, SAFTI Military Institute, 2.

[38]Ibid., 17-19.

[39]Department of the Army, 2-4.

[40]Singapore Armed Forces Centre of Leadership Development, "Military Ethics and the Profession of Arms in the 21st Century," 10.

Indeed, the importance of ethics is underlined by the belief that "such trustworthiness and uprightness of character must be unshakeable for the SAF."[41]

Likewise with intellectual capacity, the centrality of military ethics in operations is not a new phenomenon. Over the past few decades, militaries around the world have witnessed numerous ethical failures, some with devastating and heart-wrenching consequences. During the My Lai massacre in Vietnam in 1968, U.S. forces killed at least 175-200 Vietnamese men, women, and children in Son My village, even though the post mortem investigation revealed that only 3-4 of them were hostile Viet Cong members.[42] During the Rwanda genocide in 1994, U.N. peacekeepers had credible intelligence that Hutu extremists were planning a systematic extermination of the Tutsis, but were powerless to prevent the genocide from taking place due to restrictions placed by the political leaders in the U.N. headquarters in New York.[43] More recently, in 2004, the Abu Ghraib torture and prisoner abuse by U.S. soldiers in Iraq provides yet another example of ethical failures by military forces during conflicts and operations.

In the contemporary security environment, the rising importance of military ethics becomes evident as officers are confronted with ethical dilemmas in new and often ambiguous situations across the spectrum of operations. These dilemmas are exacerbated by the increasing blurring of lines between hostile enemy forces and innocent civilians,

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[41]Singapore Armed Forces Centre of Leadership Development, "Military Ethics and the Profession of Arms in the 21st Century," 10.

[42]University of Missouri-Kansas City School of Law, "Summary Report from the Peers Report on the My Lai Massacre," http://www.law.umkc.edu/faculty/projects/Ftrials/mylai/ summary_rpt.html (accessed 1 October 2009).

[43]Roméo Dallaire, *Shake Hands with the Devil: The Failure of Humanity in Rwanda* (New York, NY: Carroll and Graf Publishers, 2004), ix-xi.

particularly in low intensity conflicts or counter-terrorism operations within the homeland, which makes it a challenge for the military to identify and engage legitimate targets while minimizing collateral damage. For example, the decisions and actions of the IDF in Gaza during Operation Cast Lead in 2008 remain controversial to this date. Opinions are divided as to whether the IDF was justified in bombing Hamas targets operating amongst the civilian populace, or it should have refrained from such military operations in order to prevent the large civilian death toll which ran into the thousand.[44]

The ethical dilemmas and challenges in full spectrum operations are not helped by the increasing proliferation of technology such as precision guided munitions (PGM) and other standoff weapons. Even though traditional ethics and law require the use of military force to be a last resort, the mere existence of standoff and precision weapons actually increases the willingness of leaders to apply military force because these weapons allow the engagement of enemy forces without risk to friendly forces.[45] A case in point is the current pervasive use of unmanned aerial vehicles by the U.S. forces operating in Afghanistan. While these drones are an effective and less risky alternative to deploying troops on the ground, an investigator from the U.N. Human Rights Council has expressed concern that the use of these drones might result in illegal executions and has demanded

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[44]David Landau, "The Gaza Report's Wasted Opportunity," *The New York Times*, 20 September 2009.

[45]Martin Cook, Deputy Department Head and Professor of Philosophy, "Ethical Challenges of Military Service in the 21st Century," in Singapore Armed Forces Centre of Leadership Development, "Military Ethics and the Profession of Arms in the 21st Century" (Proceedings Papers: SAFTI MI 10th Anniversary Distinguished Speaker's Series, 2005), 23.

accountability from the U.S. on this issue.[46] The concern is not unfounded. On 4 May

2009, a U.S. B1-B bomber dropped two 500-pound guided bomb units (GBUs) in an

airburst configuration in the vicinity of Gerani Village in Afghanistan, despite the fact

that neither the ground force commander nor the B-1B crew could confirm the presence

or absence of civilians in both engagements. The GBUs caused as many as 86 civilian

casualties and sparked off massive public outrage.[47] The incident subsequently led the

U.S. military to review its tactics, which henceforth requires U.S. troops taking fire in

populated areas to break contact rather than risk civilian casualties.[48]

In the contemporary security environment, officers can also expect to face ethical

dilemmas in dynamic situations where a split-second decision can have strategic

implications. As full spectrum operations compress the differences between the

traditional tactical, operational, and strategic levels of war, moral failures at the tactical

level can bring about strategic consequences. The accidental bombing of the Chinese

Embassy in Belgrade in 1999 as a result of inaccurate tactical level intelligence, and the

Abu Ghraib torture and prisoner abuse in Iraq in 2004 both illustrate the impact of

tactical and operational events on the strategic context of those engagements.[49]

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[46]Reuters, "U.S. Use of Drones Queried by U.N.," *The New York Times*, 28 October 2009.

[47]U.S. Central Command, "USCENTCOM'S Unclassified Executive Summary– U.S. Central Command Investigation into Civilian Casualties in Farah Province, Afghanistan on 4 May 2009," 18 June 2009.

[48]Yochi J. Dreazen, "U.S. Revisits Afghan Battle Rules," *The Wall Street Journal*, 24 June 2009, http://online.wsj.com/article/SB124571281804038963.html (accessed 1 October 2009).

[49]Cook, 24.

It is clear that the Third Generation Singapore Army Officers need to rely not only on their intellectual capacity, but on their ethics and values in order to make sound decisions in full spectrum operations. The ethical challenges facing the Third Generation Singapore Army officers and the importance of ethics in the contemporary security environment are best summed up in the remarks made by Brigadier General Tan Meng Dui, the current Director of Military Intelligence in the SAF, "With greater decentralization and more networking, decisions will increasingly be pushed downwards. Faced with situations which are uncertain, where right may be wrong, and black could be just a darker shade of grey, military ethos and values become critical important as corporals start to have to interpret the Commander's intent, and military units need to self-synchronize for action. In a way, the ethos and values of the military profession are like the proverbial spots on the leopard's skin. It may differ in size and shape between different militaries, depending on cultural and strategic contents, and even evolve over time, but its fundamental pinning will remain enduring, and they will continue to be an inalienable aspect of a military profession."[50]

Knowledge of the Military Profession

How can I be a professional if there is no profession?[51]

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[50]Meng Dui Tan, Commander HQ Air Defence Systems Division, "Opening Address: Military Ethics and the Profession of Arms in the 3G SAF," in Singapore Armed Forces Centre of Leadership Development, "Military Ethics and the Profession of Arms in the 21st Century" (Proceedings Papers: SAFTI MI 10th Anniversary Distinguished Speaker's Series, 2005), 10.

[51]Don M. Snider, "The U.S. Army as Profession," in Don M. Snider and Lloyd J. Matthews, eds., *The Future of the Army Profession,* rev. ex. 2nd ed. (Boston, MA: McGraw Hill Custom Publishing, 2005), 3.

The third key quality that the Third Generation Singapore Army officers require to operate in the fog and friction of the contemporary security environment is knowledge of the military profession. Possessing a clear and common understanding of the military profession is critical for two reasons. First, from an organizational and individual perspective, it provides the basis for developing professional military officers. The Singapore Army needs to define the roles and expectations of its officers before the appropriate career and development schemes can be designed to groom its officers in terms of the knowledge, abilities, and qualities required to meet the challenges of the contemporary security environment. On the other hand, the Singapore Army officers need to be convinced of their roles and expectations, in order to align their efforts with those of the organization and feel motivated to achieve a common goal. As Samuel Huntington explained, officership is "strongest and most effective when it most closely approaches the professional ideal."[52]

Second, a common understanding of the military profession ensures that the Singapore Army and the Singapore society in general maintain a strong commitment to defense. The SAF was first established to ensure the country's security, survival, and success. With falling birth rates and rising education levels, the Singapore society may become adverse to putting the lives of the citizen soldiers at risk, and start to question the legitimacy and need for the SAF's involvements in operations, especially those in foreign lands and which may not appear to be directly related to the defense of Singapore's sovereignty. The Third Generation Singapore Army officers need to be able to explain and communicate coherently the purpose of their missions across the full spectrum of

[52]Huntington, 11.

operations to citizen soldiers and Singaporeans alike, in order to strengthen their belief and commitment to defense.[53]

Dr. Don Snider, a visiting research professor at the Strategic Studies Institute in the U.S. Army War College, argues that the army must remain foremost a profession and guard against the risk of becoming simply another governmental bureaucracy. This is to prevent the army from losing the development and adaptation of the expert knowledge undergirding effective land combat, and a potential weakening of discipline among soldiers within an institution capable of terrible destruction.[54]

These risks are perhaps best illustrated in the recent experience of the Canadian Forces (CF). After the end of the Cold War, the CF had operated for a significant period of time without a clear understanding of the profession of arms in the Canadian context. Canadian forces were deployed to peacekeeping missions around the globe without clear definitions or preparations for their roles and expectations. In situations where the classic Cold War era mentality did not fit, Canadian forces encountered frustration and failure.[55] In Rwanda, Canadian Lieutenant General Roméo Dallaire was the U.N. force commander when the genocide took place in 1994. He later attributed his failures in Rwanda to the lack of education and professional development of senior officers, whose technical and

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[53]Singapore Armed Forces Centre of Leadership Development, "Military Ethics and the Profession of Arms in the 21st Century," 67.

[54]Snider, 15-16.

[55]Alan C. Okros, Associate Professor Department of Military Psychology and Leadership, "The Profession of Arms in the 21st Century–The Canadian Forces Perspective," in Singapore Armed Forces Centre of Leadership Development, "Military Ethics and the Profession of Arms in the 21st Century" (Proceedings Papers: SAFTI MI 10th Anniversary Distinguished Speaker's Series, 2005), 55-57.

experiential limitations in peacekeeping missions were obvious.[56] In Somalia, Canadian

soldiers took a 16-year-old youth into custody and beat him to death.[57]

The incidents in Rwanda and Somalia triggered a widespread furor in Canada,

and resulted in a major effort to transform the CF to meet the challenges of the

contemporary security environment. The CF realized the importance for individual

soldiers to internalize for themselves what it meant to serve in uniform, what their

obligations were, and were able to exercise judgment about their own personal conduct.

Having a formal structure, updated doctrine, and good leadership were insufficient to

ensure effective and honorable conduct in the CF.[58] This was the context which led to the

current CF doctrine on the Profession of Arms, which codified for the first time what it

meant to be in the Canadian military profession, and defined the obligations of the CF not

only to the Canadian society, but also to the other societies in which its soldiers operate.[59]

The Singapore Army currently lacks a singular doctrinal concept that defines

what the military profession represents in the Singapore context.[60] While professionalism

is listed as one of the SAF's seven core values, it is different from a profession. In 2004,

a study team formed by the Singapore Command and Staff College defines a profession

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[56]Dallaire, 515-516.

[57]Okros, 57.

[58]Ibid., 56-58.

[59]Ibid., 59-63.

[60]Teck Yin Lim, Commandant Singapore Command and Staff College, "Concept of Profession and the SAF – Perspectives of the 2004 CSC Project Study Team," in Singapore Armed Forces Centre of Leadership Development, "Military Ethics and the Profession of Arms in the 21st Century" (Proceedings Papers: SAFTI MI 10th Anniversary Distinguished Speaker's Series, 2005), 45.

as "a collection of people put together, by a country, for the purpose of serving a need of the country, based on some intrinsic belief in the way of life," and a professional as "a person who is either competent or who embodies the ideals and ethos of the profession he or she subscribes to."[61] The definition of a profession is further clarified by Samuel Huntington, who describes a profession as "a peculiar type of functional group with highly specialized characteristics" in terms of its expertise, responsibility, and corporateness,[62] and the expertise which distinguishes the military officer from almost all other professions and civilians is the management of violence.[63] General Sir John Hackett, a distinguished British officer who once served as the Commandant of the Royal Military College of Science, Shrivenham, also wrote in *The Profession of Arms* that the function of the profession of arms in the modern state system is the ordered application of military force in pursuit of a social goal or value.[64]

As Dr. Don Snider wrote, the U.S. Army officer corps is the "commissioned agent of the American people responsible for the continued stewardship of the profession" in this period of high demands and dynamic change.[65] Likewise, the Third Generation

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[61]Weng Wah Chris Lo, Acting Head Future Doctrine Branch, "Concept of Profession and the SAF–Perspectives of the 2004 CSC Project Study Team," in Singapore Armed Forces Centre of Leadership Development, "Military Ethics and the Profession of Arms in the 21st Century" (Proceedings Papers: SAFTI MI 10th Anniversary Distinguished Speaker's Series, 2005), 50.

[62]Huntington, 8-10.

[63]Ibid., 11.

[64]Royal Military College of Canada, "Developing the Professional Canadian Forces Officer," 8 January 2009, http://www.rmc.ca/bg-cg/rep-rap/withers/dpcfo-pofc-eng.asp (accessed 1 October 2009).

[65]Snider, 33.

Singapore Army officers need to possess a clear knowledge of the military profession to ensure that the Singapore Army remains ready, relevant, and decisive in the contemporary security environment.

<div align="center">Benefits of Training vis-à-vis Education</div>

> The management of violence is not a skill which can be mastered simply by learning existing techniques. It is in a continuous process of development, and it is necessary for the officer to understand this development and to be aware of its main tendencies and trends. Only if he is aware of the historical development of the techniques of organizing and directing military forces can the officer expect to stay on top of his profession.[66]

There is substantial literature on the differences between "training" and "education" in developing military leaders for the contemporary security environment. This difference is aptly summed up by retired General Peter Schoomaker, and encapsulated as one of the guiding principles for the U.S. Army CGSC, "Training for certainty and educating for uncertainty."[67] Training is focused on teaching what to think and what the answers ought to be, while education is concerned with teaching how to think and what the questions ought to be.[68] Lieutenant General Sir John Kiszely argues that training prepares leaders, both individually and collectively, for predictable and specific tasks in given circumstances, while education develops the mental powers and understanding of the leaders to prepare them for the unpredictable and for conceptual challenges. Specifically, education plays a key role in developing the capacity for good

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[66]Huntington, 13-14.

[67]Greenshields and Gustaitis, 26; Command and General Staff College.

[68]Jeffrey D. McCausland, "Developing Strategic Leaders for the 21st Century," Strategic Studies Institute (February 2008), x.

judgment and the necessary political acumen, qualities which are in high demand in current military operations.[69]

Lieutenant General Sir John Kiszely further proposes that while training is necessary to equip military forces with basic skills for contemporary operations, it is insufficient by itself to meet the challenges across the full spectrum of operations. In particular, the unique, complex, and dynamic nature of the enemy during counter-insurgency operations increases the likelihood that "aspects of our doctrine are liable to be out of date almost from the day of publication." Hence, it is important that military leaders are educated to maintain their ability to learn and adapt faster than the enemy. Given that relatively junior officers can also be expected to make very senior decisions during military operations, education should not be restricted to the senior officers.[70]

<div align="center">

Education of Military Officers for the Contemporary
Security Environment

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Established militaries recognize and acknowledge the importance of education in developing military officers for the contemporary security environment. The instruction in the U.S. Army CGSC now focuses more on how to think--education--instead of what to think--training--so as to develop scholar warriors in an age of perpetual conflict.[71] Likewise, the Canadian Royal Military College recognizes the need for a broad liberal education amongst the officer corps, and for officer trainees to undertake extensive

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[69]Kiszely, 14-15.

[70]Ibid., 12-16.

[71]Heller and Thomas, 6.

studies of the humanities, sciences, military theory, and military history as part of their introduction to the profession of arms.[72]

The importance of education in developing military professionals can be seen from a historical context. Williamson Murray, a renowned historian, attributes the success of the U.S. military during World War I and World War II to the cultural and intellectual verve of the U.S. officer corps that had been nurtured in the war colleges and staff colleges. He notes that these colleges were founded for the education, as opposed to the training, of officers. However, the post-World War II period saw a decline of intellectual seriousness amongst the officer corps, as American technology and the coming of the computer age were seen to render factors such as history, culture, and the traditional understanding of war irrelevant. This arguably contributed to U.S. failure during the Vietnam War and the post-war insurgency in Operation Iraqi Freedom.[73]

Samuel Huntington notes that the expertise of the professional military officer is acquired only through prolonged education and experience.[74] Some aspects of the educational requirements for military officers are more obvious than others.[75] For example, the importance of military history can be seen by the respect and reliance on historians by U.S. military commanders for advice on strategy and tactics in Afghanistan, Iraq and other present-day conflicts. The most influential example is the

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[72]Royal Military College of Canada.

[73]Williamson Murray, "Clausewitz Out, Computer In," *The National Interest* (1 June 1997), http://www.clausewitz.com/readings/Clause&Computers.htm (accessed 1 October 2009).

[74]Huntington, 8.

[75]Kiszely, 16.

Counterinsurgency Field Manual adopted by the U.S. Army in 2006, which had Conrad

Crane, director of the U.S. Army Military History Institute at the Army War College, as

the lead writer, and drew upon the opinions of dozens of academic historians and other

experts.[76] As U.S. General Douglas MacArthur once said, "Research (of military history)

does bring to light those fundamental principles and their combinations and applications,

which in the past, have been productive of success. These principles have no limitation of

time. Consequently, the army extends its analytical interest to the dust buried accounts of

wars long past as well as to those still reeking with the scent of battle."[77]

Other subjects in the arts and social sciences also contribute to the development of

the military officer by equipping them with the means to make sense of the contemporary

security environment. For example, literature helps to develop sensitivity towards

language with all its subtle nuances and complexities, and opens minds to new

experiences and different perspectives, while regional and international studies, cultural

awareness, languages, and social sciences help the military officer, especially those

working in the field of intelligence, better understand how individuals, institutions, and

society interact.[78]

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[76]James Glanz, "Historians Reassess Battle of Agincourt," *The New York Times*, 25 October 2009, http://www.nytimes.com/2009/10/25/world/europe/25agincourt.html (accessed on 25 October 2009).

[77]"Chapter II Operation Chromite," in *C500 Joint Functions Theme: Advance Sheets and Readings Book* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 2008), 206.

[78]Neelam Aggarwal, Selina Lim, and Brian Lee, "Include Arts and Social Science Teachings," *The Straits Times*, 1 September 2009; Walter Pincus, "Howard, Va. Tech Join U.S. Intelligence Program," *The Washington Post*, 7 September 2009.

In short, the Third Generation Singapore Army officers should seek to achieve an education that is as broad based as possible. It can be said that there is hardly any subject that can claim to adequately prepare the professional military officer for the contemporary security environment. As Samuel Huntington wrote about the wider education qualifications required of the military officer, "Just as law at its borders merges into history, politics, economics, sociology, and psychology, so also does the military skill. Even more, military knowledge also has frontiers on the natural sciences of chemistry, physics, and biology. To understand his trade properly, the officer must have some idea of its relation to these other fields and the ways in which these other areas of knowledge may contribute to his own purposes. In addition, he cannot really develop his analytical skill, insight, imagination, and judgment if he is trained simply in vocational duties. The abilities and habits of the mind which he requires within his professional field can be acquired only through the broader avenues of learning outside his profession. The fact that, like the lawyer and the physician, he is continuously dealing with human beings requires him to have the deeper understanding of human attitudes, motivations, and behavior which a liberal education stimulates. Just as a general education has become the prerequisite for entry into the professions of law and medicine, it is now also almost universally recognized as a desirable qualification for the professional officer."[79]

Balancing the Demands of Training and Education

In spite of the rising importance of education, training continues to contribute to the development of the military officer. It is critical for training to be founded on

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[79]Huntington, 14.

education, so as to ensure that military officers maintain the versatility and flexibility to adapt the training to changing circumstances.[80] The complementary roles of training and education are also noted in a report published by the Strategic Studies Institute, which proposes that the development of strategic leaders for the 21st century will need to include a combination of training for specific tasks and continuous education that considers both policy and process.[81]

While much has been published about the differences between training and education, there is an apparent lack of discussion, not to mention consensus, on how military establishments should balance between these two competing demands in developing their leaders. One of the ways that have been proposed to understand and balance the demands of training and education over the career of the military officer is shown in figure 4. Under this model, the focus in the early career of the officer is on the training of component characteristics such as physical strength, courage, and direct leadership. The intellectual component increases as the officer progresses in the career and the educational demands of the profession grow.[82] However, this model is somewhat misleading because it appears to understate the importance of education to the junior officers, who as seen earlier, can be expected to make very senior decisions during military operations in the contemporary security environment.

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[80]Kiszely, 15.

[81]McCausland, ix.

[82]Jeffrey D. McCausland and Gregg F. Martin, "Transforming Strategic Leader Education for the 21st-Century Army," *Parameters* (Autumn 2001): 24-25.
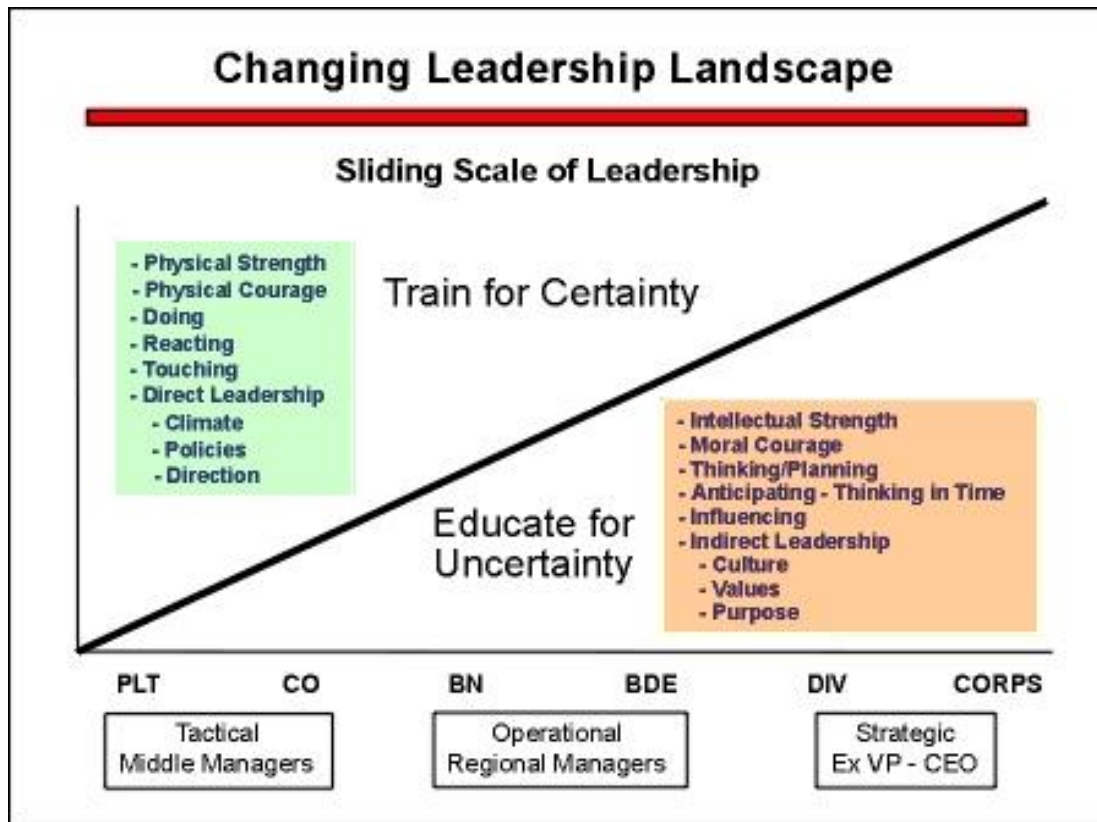
Figure 4.   Training and Educational Development during a Military Career.
Source: Jeffrey D. McCausland and Gregg F. Martin, "Transforming Strategic Leader Education for the 21st-Century Army," *Parameters* (Autumn 2001): 24.

There is a clear consensus though in the difficulty of meeting all the training, education, and operational demands across the finite and limited time in the military career. Lieutenant General Sir John Kiszely notes that many militaries are already under pressure from a high rate of operational deployments, and achieving the necessary amount of training time across the full spectrum of operations is "highly problematic."[83] Likewise, Charles Heller and Ted Thomas note that the task of adequately training and educating the officers to be adept across the spectrum of operations may be "a goal too

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[83]Kiszely, 13.

difficult to achieve," and trying to achieve a balance between the two "diametrically opposed cultures" presents a significant challenge for the Department of Command and Leadership at the U.S. Army CGSC.[84] The exacting demands on training, education, and deployment time are also acknowledged by U.S. Army Chief of Staff George W. Casey, who wrote in the Army Training and Leader Development Guidance for FY10-11 that Army leaders should "train smart and balance training and education requirements with the need to rest a seasoned force."[85]

For the Singapore Army, balancing the demands of training and education is a critical issue because the overall career length of an officer is not only finite, but also relatively shorter compared to other established militaries. The lack of published research in balancing the demands of training and education makes this thesis even more important in analyzing how the Singapore Army can achieve an optimal mix of training, education, and operational deployment to develop its officers for the challenges of full spectrum operations in the contemporary security environment. The next chapter explains the methodology that will be used to analyze how the Singapore Army can design a training and education roadmap to develop officers as leaders for the Third Generation fighting force.

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[84]Heller and Thomas, 6.

[85]George W. Casey, Memorandum, 31 July 2009, "Army Training and Leader Development Guidance, FY10-11."

CHAPTER 3

METHODOLOGY

This chapter explains the methodology used to analyze how the Singapore Army can design a training and education roadmap to develop officers as leaders for the Third Generation fighting force. The analysis framework adopts the qualitative differences between training and education, as described by retired General Peter Schoomaker and Lieutenant General Sir John Kiszely, to examine the proportion of time spent on training, education, and operations across the typical career of a Singapore Army officer.

As defined in the literature review, training and education are complementary methods used to develop different leadership qualities in a military officer. Training prepares leaders, both individually and collectively, for predictable and specific tasks in given circumstances, while education prepares leaders for the unpredictable and for conceptual challenges. In the context of a Singapore Army officer's career, training includes activities such as basic training where enlistees learn the fundamental military skills, officer cadet school, company and battalion tactics courses, and part of the command and staff course (equivalent to the Intermediate Level Education (ILE) in CGSC) which focuses on tactics at the brigade level and above. Education encompasses activities such as the undergraduate studies, tri-service warfighter course where officers from different services attend the same course designed to expose organizational leaders to the fundamentals of joint operations, and a majority of the command and staff course which focuses on general studies such as leadership, military history, and joint operations. For selected officers with high potential, education also includes post-graduate studies and attendance at local or overseas war colleges.

A typical Singapore Army officer enlists at the age of nineteen and retires at the age of forty-five. There are existing career milestones that officers are expected to reach within the twenty-six years of their military career. The established definitions of training and education are applied to these career milestones to show the amount of time spent on training, education, and operations (see figure 5).

	19–20	20–24	24–28	28–32	32–33	33–45
Training	12 — Basic Military Training / Officer Cadet School		2 — Company Tactics Course, Branch Advance Course	2 — Battalion Tactics Course	3 — Command and Staff Course	
Education		48 — Undergraduate Studies		1 — Tri-Service Warfighter Course	7 — Command and Staff Course	24 — Post-Graduate Studies *(for selected officers only)*, War College *(for selected officers only)*
Operations			46 — Platoon Comd, Junior Staff/Instructional Tour, Company 2IC, Company Comd	45 — Battalion S3, Staff/Instructional Tour	2 — Staff/Instructional Tour	120 (for selected officers) /144 (for majority of officers) — Command/Staff/Instructional Tour

Note: Figures in the table indicate the number of months spent on training, education, or operations.

Figure 5. Time Spent on Training, Education, and Operations in the Typical Career of a Singapore Army Officer.

Source: Created by author.

Based on the current roadmap for the typical career of a Singapore Army officer (as shown in figure 5), the next chapter analyzes how the Singapore Army can design a

comprehensive training and education roadmap that dedicates more resources to the education of its officers, while meeting the high demands of operations and training, within a finite and limited career length. The chapter also explores various initiatives that the Singapore Army can consider to enhance the leadership development of its officers, including the promotion of self-education, unit education program, participation in inter-ministry/agency work attachments and multinational exercises, active management of the civilian education of the military officers, infusion of appropriate levels of broad liberal education at various stages of the military career, continual and high-level emphasis on critical and creative thinking and military ethics, and leveraging on partnerships with established institutions of higher learning to deliver the content for these subjects.

CHAPTER 4

ANALYSIS AND RECOMMENDATIONS

This chapter analyzes and proposes a revised training and education roadmap that maps out the key leadership developmental milestones that officers should achieve throughout their career in the Singapore Army. The chapter shows that in spite of the high demands for operations and training within a finite and limited military career, the Singapore Army can and should dedicate more resources towards the education of its officers as the best way of developing the adaptive leaders for the contemporary security environment.

To this end, this chapter explores various initiatives that the Singapore Army can consider to enhance the leadership development of its officers, including the promotion of self-education, unit education program, participation in inter-ministry/agency work attachments and multinational exercises, active management of the civilian education of the military officers, infusion of appropriate levels of broad liberal education at various stages of the military career, continual and high-level emphasis on critical and creative thinking and military ethics, and leveraging on partnerships with established institutions of higher learning to deliver the content for these subjects.

Review of the Current Singapore Army Officer Training
and Education Roadmap

An analysis of the current training and education roadmap for the typical career of a Singapore Army officer shows two key gaps in the leadership development of the Third Generation Singapore Army officer. These gaps are the relatively disruptive and short time span dedicated to professional military education, and the lack of emphasis on

knowledge of the military profession and the consequent broad liberal education that the Singapore Army officer needs in order to operate in the contemporary security environment.

<p style="text-align:center">Disruptive and Short Time Span for Professional
Military Education</p>

The first key gap in the leadership development of the Third Generation Singapore Army officer is the relatively disruptive and short time span dedicated to professional military education. Figure 5 (in chapter 3) shows the disruption in the structured education opportunities of the Singapore Army officer. Most of the formal education activities take place in the first half of the military career, and there exists a four year gap of formal military education between the undergraduate studies and attendance of the Tri-Service Warfighter Course. The disruption in military education is even more glaring for the majority of the officers who are not selected to attend post-graduate studies and war college. These officers will typically spend 48 months on their undergraduate studies, and have to wait for four years before receiving their final eight months of professional military education.

Figure 6 shows the relatively small percentage of time that is devoted to the professional military education of the Singapore Army officer. Out of the total career length of 312 months (or 26 years), majority of the Singapore Army officers will typically spend 237 months (or 76 percent of their career) on operations, 56 months (18 percent) on education, and nineteen months (6 percent) on training. For selected officers with the potential to hold higher appointments from brigade commanders and above, the time spent on operations is reduced to 213 months (68 percent), while the time spent on

education is increased to eighty months (26 percent). On a positive note, the increased

proportion of time spent on education for selected officers with high potential reinforces

the belief in the importance of education in developing professional military officers.
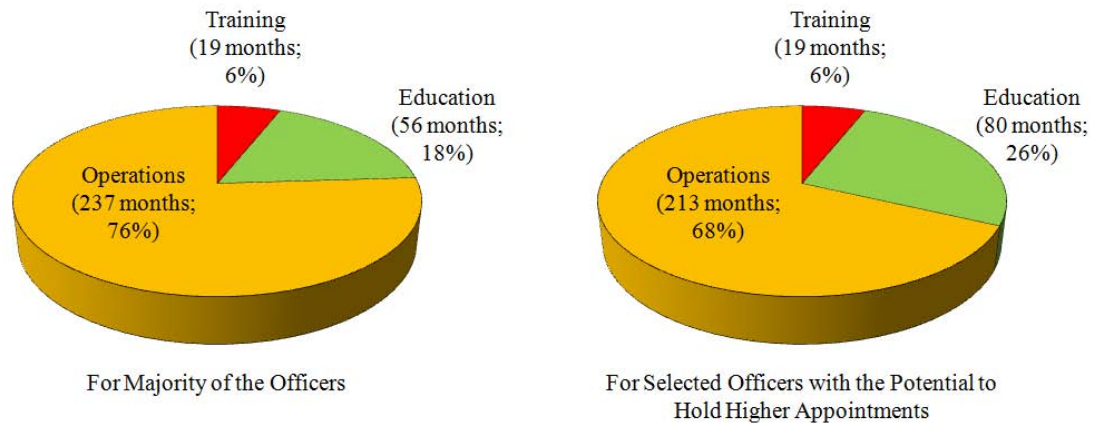
Figure 6.   Proportion of Time Spent on Training, Education, and Operations in the
Typical Career of a Singapore Army Officer.
Source: Created by author.

The current training and education roadmap contradicts the widely-acknowledged

need for continuing education and lifelong learning amongst military professionals.

While the literature review does not suggest any benchmarks in terms of the balance

between training, education, and operations, analysis of the current training and education

roadmap of the Singapore Army officer suggests that there is a significant potential to

further enhance the professional military education of the Third Generation Singapore

Army officers. This is possible given that the relatively peaceful and stable conditions in

Singapore imply that most Singapore Army officers do not have to deploy for long

periods away for home. Apart from peacekeeping missions and homeland defense

operations, most of the officers typically spend their time working regular hours in command, staff, or instructional appointments. As such, there is scope to integrate greater professional military education opportunities during these periods of regular operational deployments within Singapore.

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Lack of Emphasis on Knowledge of the Military Profession
and Broad Liberal Education
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The second key gap in the leadership development of the Third Generation Singapore Army officer is the lack of emphasis on knowledge of the military profession and the consequent broad liberal education that the Singapore Army officer needs in order to operate in the contemporary security environment. Unlike established western militaries such as the U.S. military or the CF, the Singapore Army has neither been able to provide a comprehensive introduction to the profession of arms and its components, nor a liberal education which includes extensive studies of military theory, military history, the humanities, or the sciences.[86] This can be attributed to three reasons.

First, there has been an apparent lack of intellectual discourse within the Singapore Army on what it means to be a profession of arms. Unlike western armies that have centuries of longstanding centuries, the Singapore Army is still considered as a fairly young organization. Given the hostile environment surrounding Singapore's independence in 1965, the immediate focus for the Singapore Army then was to acquire hardware and boost its ranks in order to rapidly build up a credible defense capability. These circumstances have made it difficult for the Singapore Army to devote attention

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[86]Singapore Armed Forces Centre of Leadership Development, "Military Ethics and the Profession of Arms in the 21st Century," 67.

and resources towards a robust discussion on the profession of arms. Even though the situation has reversed course in recent years with greater emphasis on a systematic and comprehensive leadership development programme for its officers, the Singapore Army still lacks a singular doctrinal concept that defines what the military profession represents in the SAF context, and ignorance of this knowledge is somewhat prevalent through the entire army.[87]

Second, the Singapore Army lacks the in-house capability to provide the relevant professional military education to its officers. The absolute number of regular officers in the Singapore Army is relatively small compared to established western militaries, and the lack of masses makes it economically prohibitive for the Singapore Army or the SAF to either establish dedicated military universities such as West Point in the U.S. and the École Spéciale Militaire de Saint-Cyr in France, or to build a substantial faculty within the army. This stands in stark contrast to the various departments and resources that exist within the U.S. Army CGSC or War College. The lack of expertise means that important subjects such as military history and military theory are neither taught nor discussed extensively until the later part of the officers' careers during the command and staff course. The fact that not all officers are considered for the command and staff course implies that there will be some in the Singapore Army who have never been exposed to the critical subjects of military history and military theory.

Third, the structure of the Singapore Army constraints the organization to devote most of the time to the training of its officers, especially in the early stages of their career. Given that an overwhelming majority of the officers are conscripts and reserves,

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[87]Lim, 45.

operational demands and economies of scale dictate that the conscript and reserve officers are trained together with the regular officers. However, conscript officers are required to serve full-time for only two years, of which half the time is spent in Officer Cadet School prior to receiving their commission. The limited training time of one year makes it a challenge to expand the curriculum for the officer cadets to include relevant subjects such as military theory and history. It is also not viable to increase beyond the one year that these cadets currently spend in Officer Cadet School, given that the conscript officers will need to acquire some operational experience prior to their transition to the reserve force. Likewise, the limited opportunities and time available for the annual call-up of the reserve officers constrain the Singapore Army to devote most of the time to training these officers in specific skills that are required for them to perform their operational roles, and providing cursory introduction to subjects such as military history and theory.

Even though the Singapore Army has not been able to provide a comprehensive introduction to the profession of arms or a broad liberal education, it recognizes the importance of education in developing its officers. Various initiatives have been put in place, including the provision of numerous opportunities such as study leave or scholarships for the new and existing officers to pursue undergraduate and graduate qualifications. However, as U.S. Army Colonel (retired) Lloyd J. Matthews accurately describes, "advanced degrees do not necessarily an intellectual make."[88] In other words, such degrees should expand the officers' intellectual capacities and hone them for

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[88]Lloyd J. Matthews, "Anti-Intellectualism and the Army Profession," in Don M. Snider and Lloyd J. Matthews, eds., *The Future of the Army Profession*, rev. and ex. 2nd ed. (Boston, MA: McGraw Hill Custom Publishing, 2005), 71-72.

professional utilization, and not simply taken at face value as evidence of intellectuality. To this end, it is noted that within the Singapore Army, there lacks a system to track and ensure that the officers receive a broad liberal education. Officers are given much flexibility to decide their respective fields of study, so long as they are completed in reputable local or overseas universities. Anecdotal evidence suggests that the distribution of the Singapore Army officers across the various fields of study generally mirrors that of the society in Singapore. For example, between the 1960s and 1980s, most officers likely pursued engineering or science degrees in line with the government's push to encourage the growth of the economy. It is only in recent times that there appears to be a shift towards the liberal arts and sciences, again in line with the larger trends in the society.

To address the two key gaps in the leadership development of the Third Generation Singapore Army officer and optimize the training, education, and operational deployments of the Singapore Army officers within their military career, the Singapore Army needs to expand professional military education opportunities, and devote greater resources to develop intellectual capacity, military ethics, and knowledge of the military profession amongst its officers.

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Expanding Professional Military
Education Opportunities

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The key to addressing the relatively disruptive and short time span dedicated to professional military education is to institutionalize the importance of continual education and lifelong learning to the development of the Third Generation Singapore Army officer. Professional military education opportunities should not only be restricted to the military schools and civilian universities, but expanded throughout the career by

deliberately integrating education with periods of training and operational deployments for the officers in Singapore. This can be achieved in three ways, namely self-education, unit education program, and active participation in inter-ministry/agency work attachments and multinational exercises.

Self-Education

The first initiative to expand professional military education opportunities is active pursuit of self-education. Self-education not only increases the proportion of time devoted to education, but also motivates the officers to build interest and take personal responsibility for their individual development. This motivation and belief in turn set the foundation for the future success of any effort at professional military education.

While the long term goal is to cultivate a learning culture and build individual motivation to sustain the self-education effort, steps can be taken in the meantime to set the program in motion. One useful way is the introduction of qualification exams to determine entry to the respective military schools throughout the different career milestones. These exams can be designed based on the recommended reading lists which officers are required to complete before moving on to the next stage of their career. Given that officers are required to attend the courses at the respective military schools before they can be considered for subsequent promotion, these officers will certainly feel compelled--and in the long run, hopefully motivated--to take their self-education efforts seriously.

The benefits of having qualifications exams are exemplified by the German Army. Prior to World War II, officers in the Prussian-German Army who desired to attend the *Kriegsakademie* (staff college) were required to pass an academic exam

covering a wide variety of subjects, including tactics, field intelligence, history,

geographic, mathematics, and foreign language.[89] The four days of competitive exams

demonstrated how serious the army was about professional military education throughout

an officer's career, forced the junior officers to come to grips with their profession,[90] and

allowed the *Kriegsakademie* to attract the crème de la crème.[91] The education offered at

the *Kriegsakademie* directly contributed to an efficiently organized and employed

Prussian-German Army at the tactical and operational levels, and paid huge dividends in

critical first battles such as the Battle of Poland in 1939 and Battle of France in 1940.[92]

The system of a stringent selection test remains in the modern-day German Army under

its *Führungsakademie* education system.[93]

The drive to promote self-education must be backed by appropriate organizational

support systems, such as the holistic design of recommended reading lists for officers at

different stages of their career, and ensuring convenient and affordable access to the

relevant education resources. To this end, one of the areas where the Singapore Army can

enhance the accessibility to military education resources is to revamp the existing

military library system. The SAF currently operates a military library, which provides

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[89]Stephen E. Clemente, *For King and Kaiser! The Making of the Prussian Army Officer, 1860-1914* (New York: Greenwood Press, 1992), 185-187.

[90]Williamson Murray, "Armored Warfare," 47-48.

[91]Martin van Creveld, *The Training of Officers: From Professionalism to Irrelevance* (New York: The Free Press, 1990), 27.

[92]Luke G. Grossman, "Command and General Staff Officer Education for the 21st Century: Examining the German Model" (Monograph, School of Advanced Military Studies, 2002), 1.

[93]Ibid., 17-18.

very substantial resources, within the Singapore Armed Forces Training Institute Military Institute (SAFTI MI). However, the library is consistently underutilized because it is not centrally located, operates within the same period as regular working hours, and officers are required to verify their identity and change their passes prior to entry into SAFTI MI. Even though the library provides a door-to-door delivery service for convenience, officers are required to pay a nominal fee for a maximum of five titles per package, and will still have to take time off from work to return the loan materials to the library. Immediate and simple steps can be taken to enhance the accessibility of the library, such as the extension of opening hours and allowing free access to any military officer with a recognized SAF camp pass.

Another area where the Singapore Army can enhance the accessibility to military education resources is to host the relevant content on an internet portal, similar to the Army Knowledge Online (AKO) portal adopted by the U.S. Army. The AKO portal provides extensive links and resources for self-education, including the entire suite of Rosetta Stone languages which officers can learn at their own pace and interest without any cost. The Singapore Army currently maintains a similar portal, but is similarly underutilized as the content is relatively less comprehensive, and the fact that it is hosted within the internal SAF defense network requires officers to stay in their workplace in order to access the portal. Efforts should be made to gradually host the portal on the internet and bolster its content, while taking into consideration the appropriate security concerns.

Unit Education Program

The second initiative to expand professional military education opportunities is the implementation of a unit education program. This requires a fundamental shift in mindset that the education of the military officers takes a backseat when the officers are deployed in the units. Instead, unit commanders will be held accountable and need to take active responsibility for the education of their junior officers. This can be achieved through the conduct of study groups to discuss topics relevant to the Singapore Army and contemporary security environment, or the formation of project teams to critically examine and propose solutions to problems in modern-day conflicts. The issues to be discussed should be pegged to the knowledge levels and thinking capacities that are expected of the officers at the respective platoon, company, and battalion levels.

The benefits of a unit education program are multi-fold. The program will ensure that military officers are updated on current affairs and regularly exposed to a broad liberal education in the relevant subject areas such as military history, theory, and ethics, promote critical and creative thinking, and strengthen esprit de corps by enhancing the interaction opportunities between the officers. The program will also ensure that the senior officers do not rest on their laurels and instead remain motivated to constantly seek self-improvement in order to facilitate and lead the study and project groups.

Participation in Inter-Ministry/Agency Work Attachments
and Multinational Exercises

The third initiative to expand professional military education opportunities is active participation in inter-ministry/agency work attachments and multinational exercises as part of the officers' operational deployments. These attachments and

exercises can be considered as educational opportunities because they require the military

officers to immerse and operate in a different working environment, which in turn allows

the officers to develop the capacity for good judgment and political acumen to deal with

the unpredictable and conceptual challenges. Inter-ministry/agency work attachments and

multinational exercises are also particularly useful to allow the officers to understand

how the various instruments of national power can work together for the common

purpose of national security, expand personal networks and form effective relationships,

and benchmark themselves against the best practices. The various inter-ministry/agency

work attachments that can be explored include the Ministry of Home Affairs for the

purpose of homeland defense, the Ministry of Foreign Affairs for exposure to potential

areas of interest, and the Ministry of Information, Communications and the Arts for

exposure to media relations and operations.

While inter-ministry/agency work attachments and multinational exercises are

useful to educate and broaden the perspectives of the military officers, the continued

significance of military experience and knowledge cannot be neglected. To

overemphasize the importance of education over military training is tantamount to

suggesting that a highly educated civilian will one day be able to assume the post of

Chief of Staff of the Army without any military background. The battle at the Chosin

Reservoir during the Korean War, where the U.S. Army with inexperienced commanders

lost all its equipment and almost half of its men,[94] serves as a vivid reminder on the need

for relevant operational experience and specific military domain knowledge such as

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[94]Faris R. Kirkland, "Soldiers and Marines at Chosin Reservoir: Criteria for
Assignment to Combat Command," *Armed Forces and Society* 22, no. 2 (Winter 1995):
257-274.

doctrine and tactics. These can only be accumulated through experience in the ranks. As such, participation in inter-ministry/agency work attachments and multinational exercises needs to be carefully planned to prevent the dilution and neglect of military knowledge amongst the officers.

<u>Developing Intellectual Capacity, Military Ethics, and Knowledge
of the Military Profession</u>

The key to addressing the lack of emphasis on knowledge of the military profession and the consequent broad liberal education that the Singapore Army officer needs in order to operate in the contemporary security environment is to first establish a singular doctrinal concept that defines what the military profession represents in the SAF context. The concept should clearly articulate and explain the roles and demands on the Third Generation Singapore Army officer in the contemporary security environment, in order to establish the framework for the shaping and implementation of other leadership development initiatives.

The critical endeavor of establishing a common understanding of the military profession is akin to leading successful organizational change, and a useful implementation approach to consider is the eight-stage change process suggested by Professor John Kotter from the Harvard Business School. This process requires the leader to develop a vision and strategy, communicate the change vision, and empower broad-based action amongst other requirements.[95] Essentially, this process means that the Singapore Army will need to actively involve all the members of its officer corps in the

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[95]Yvonne Doll and Billy Miller, "Leading and Making a Transformational Change," in *L100: Developing Organizations and Leaders* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 2009), 59-61.

discussion for the doctrinal concept for the military profession in the SAF context, in order to engage them to reflect and internalize the importance of their role as professional military officers.

While efforts are ongoing to determine the doctrinal concept of the military profession, parallel efforts should be made to improve the existing system of developing the intellectual capacity of the Third Generation Singapore Army officers. To this end, the Singapore Army appears to have a relatively easy task due to the rising education standards of the officers joining the military. It is commendable that the SAF has actively encouraged its new and existing officers to pursue undergraduate, graduate, and even postgraduate qualifications. However, there is a need to ensure an appropriate mix of the various fields of studies amongst the officer corps. While areas such as engineering and science remain critical to allow the officers to harness increasingly sophisticated technologies for the Singapore Army, the liberal arts and sciences play an important role in equipping the officers with the skills and knowledge to operate in the contemporary security environment. In particular, subjects such as political science (especially international relations and comparative politics), psychology, sociology, and history provide officers with the tools to better appreciate cultural differences and understand the human terrain, qualities which are in great demand in present-day conflicts.

In addition to managing the civilian education of the military officers, the Singapore Army should also incorporate appropriate levels of broad liberal education at various stages of the career of the military officer. Introduction to key concepts in military history and military theory should start in Officer Cadet School, so as to impress upon the officers the importance of such topics to the foundation of the military

profession. The depth of knowledge will then be gradually expanded as the officers

progress in their careers. To mitigate the limitations of training time, the system can be

designed such that most of the readings are done as part of the qualification exams under

the self-education program as proposed earlier.

   The Singapore Army should also expose the junior officers to strategic

considerations at the start of their military careers. The conventional wisdom for the

junior officers to focus on specific tactical issues and the senior officers to focus on

broader strategic issues is based on the longstanding belief that officers and forces

operate at distinct tactical, operational, and strategic levels. However, contemporary

military operations have provided numerous examples of the "strategic corporal"[96] and

demonstrated the increasing emphasis on small-unit leadership. Rather than viewing the

three levels of war as distinct, it may be more useful to think of them as overlapping one

another, as shown in figure 7. As such, junior officers must not only be made aware of

the strategic implications of their tactical actions, but also educated to think broadly and

contextually, and provided with a wider and deeper way of seeing the world.[97]

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[96]Charles C. Krulak, "The Strategic Corporal: Leadership in the Three Block War," January 1999, http://www.au.af.mil/au/awc/awcgate/usmc/strategic_corporal.htm (accessed 1 October 2009).
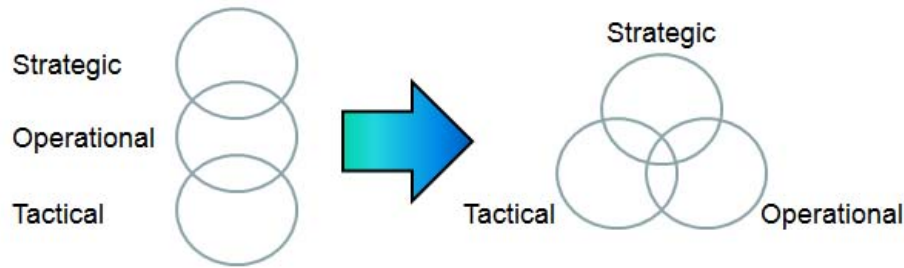
[97]McCausland and Martin, 27.

Figure 7.   Strategic, Operational, and Tactical Levels of War.
Source: Created by author.

Another aspect of the intellectual capacity of the Third Generation Singapore Army officers that needs to be developed is the ability to think in a critical and creative manner. Given the dynamic nature of the contemporary security environment, officers will need to think on their feet in order to handle the myriad of possible scenarios. While critical and creative thinking skills are arguably cultivated as part of the officer's undergraduate and graduate education, the challenge remains for the Singapore Army and the individual to continue to hone these skills, especially in the hierarchical structure of the military. Ironical as it may sound, efforts to encourage critical and creative thinking will need to be institutionalized in order to lend emphasis to their development, and to build a culture of tolerance for alternative and dissenting views. One of the ways to practice and improve these thinking skills is to provide regular and robust intellectual discourse. This can be achieved through the formation of project and study groups, especially with officers from different education backgrounds, as proposed earlier.

Aside from knowledge of the military profession and intellectual capacity, the Singapore Army should focus on the development of the military ethics of the Third Generation Singapore Army officers. Currently, military ethics education in the Singapore Army is conducted at three levels. The first level involves the clarification and

alignment of personal and organizational values in the context of the SAF mission; the second level entails the identification of threats to making values-based decisions and judgment; while the third level requires ethical reasoning through the use of case studies of real life incidents and dilemmas.[98]

While the broad structure of the ethics education system is in place, the Singapore Army can improve on the system in several ways. For example, there needs to be a continual and high level emphasis on military ethics. Studies have shown that the simple act of reminding people of moral values encourages pro-social forms of behavior and seems to enhance selflessness.[99] A similar effect can be achieved by incorporating scenarios where officers will be confronted with ethical dilemmas during regular unit evaluation exercises. In addition, education in international law such as the Laws of Armed Conflict and the role of military lawyers in conflict can be further clarified and explained to the military officers. Case study discussions can also be made more relevant and worthwhile by declassifying and opening up more of the internal cases and incidents for scrutiny and discussion.

As explained earlier, a common limitation that hampers the development of intellectual capacity and military ethics in the Singapore Army officers is the lack of in-house expertise in these subject areas. To fulfill this demand, the Singapore Army can explore partnerships with established local institutions of higher learning to offer electives on topics such as military history, theory, and ethics. Singapore Army officers

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[98]Singapore Armed Forces Centre of Leadership Development, "Military Ethics and the Profession of Arms in the 21st Century," 67.

[99]Vivien Lim, "Fixing the Moral Compass," *The Straits Times*, 17 September 2009.

will then be required to take up these electives as part of their professional military education, either during their term breaks as undergraduate or graduate students, or as part of their military course requirements throughout their career.[100]

<div align="center">
Proposed Singapore Army Officer Training
and Education Roadmap
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Figure 8 illustrates how the various initiatives proposed in this chapter will collectively address existing gaps in the leadership development of the Third Generation Singapore Army officer and achieve the intent of preparing the officers for the contemporary security environment.

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[100]Singapore Armed Forces Centre of Leadership Development, "Military Ethics and the Profession of Arms in the 21st Century," 67.
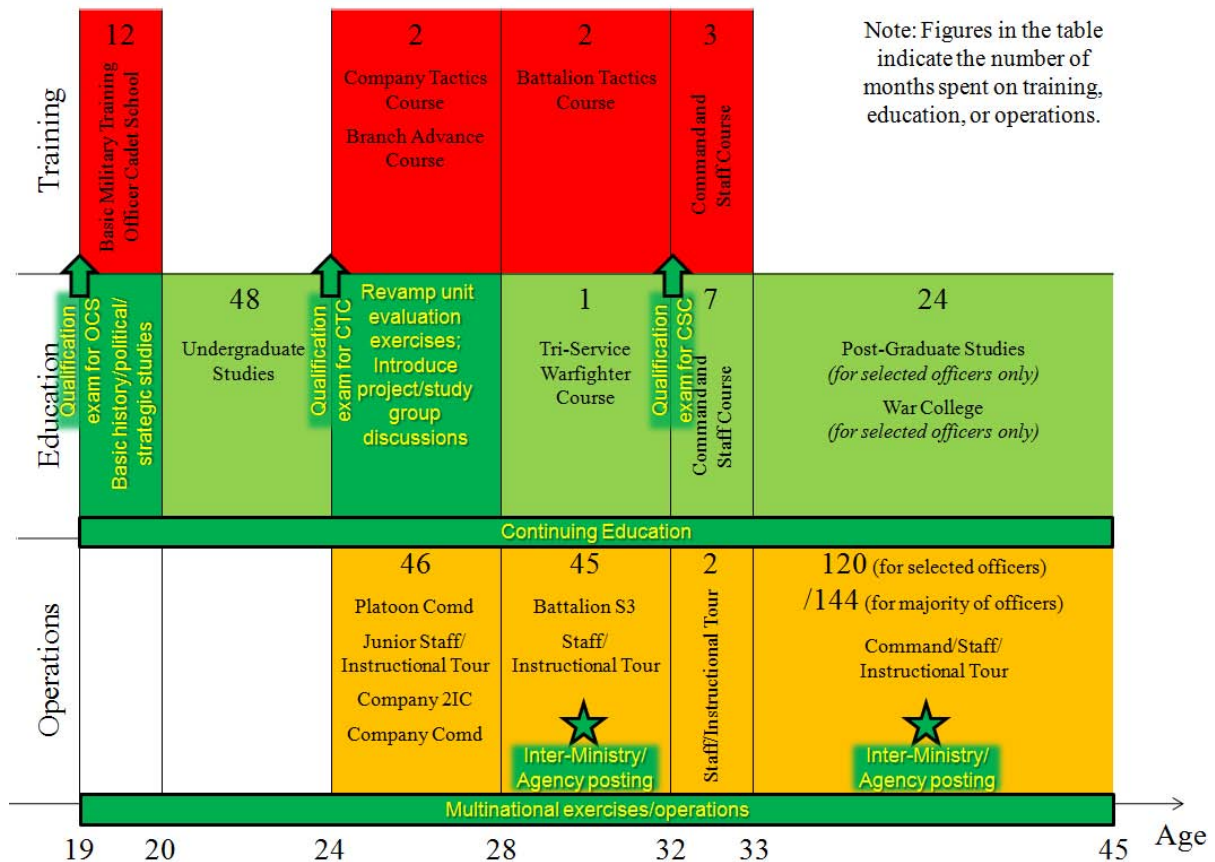
Figure 8. Proposed Training and Education Roadmap for the Third Generation Singapore Army Officer.

Source: Created by author.

Given the higher and more onerous demands placed on the Third Generation Singapore Army officers, appropriate incentives and organizational support structures should be introduced to ensure that officers who take their professional military education seriously are duly recognized. These support structures can range from having enlightened superiors who are understanding and allow time off for self-education, providing financial support for further education, and gradually raising the educational requirements as part of the promotion criteria.

Nonetheless, the question remains whether the Singapore Army is trying to achieve too much with its officer corps within too little a time. After all, the arguably self-imposed limitation for the Singapore Army officers to retire at the age of 45 has certainly made it a challenge for the Singapore Army to demand the same from its officers, as compared to other established militaries where their officers typically serve for a longer period of time. Chapter 5 concludes this thesis by offering possible alternatives to enhance the leadership development of the Third Generation Singapore Army officer.

CHAPTER 5

CONCLUSION AND ALTERNATIVES

This chapter concludes this thesis by summarizing the key points in the preceding chapters and offering possible alternatives to enhance the leadership development of the Third Generation Singapore Army officer.

Review of Key Points of Thesis

The aim of this thesis is to explore how the Singapore Army can design a curriculum to develop officers as leaders for the Third Generation fighting force. Chapter 1 introduces the thesis by explaining how the evolution of the SAF into a full spectrum force demands officers who are capable of operating in the highly volatile, uncertain, complex, and ambiguous contemporary security environment. Chapter 2 reviews the existing literature to provide insights into three key areas. First, it suggests the three key qualities that the Singapore Army officers require to operate in the fog and friction of the contemporary security environment, namely intellectual capacity, military ethics, and knowledge of the military profession. Second, it compares the benefits of training vis-à-vis education in developing the desired qualities, in particular the meaning of "training for certainty and educating for uncertainty," and the increasing importance of education in preparing officers for the contemporary security environment. Third, it highlights the current lack of discussion on how military establishments should balance between the competing demands of training and education in developing their leaders, even though there remains an urgent need to do so in view of the finite training time and pressing operational demands. Chapter 3 explains the methodology used in the thesis,

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which adopts the model based on the qualitative differences between training and education, to examine the proportion of time spent on training, education, and operations across the typical career of a Singapore Army officer.

Chapter 4 analyzes the need for a comprehensive training and education roadmap that maps out the key leadership developmental milestones for officers throughout their career in the Singapore Army. The chapter highlights two key gaps in the current training and education roadmap for the Third Generation Singapore Army officer, namely the relatively disruptive and short time span dedicated to professional military education, and the lack of emphasis on knowledge of the military profession and the consequent broad liberal education that the military professional will need in order to operate in the contemporary security environment. To address the former, the Singapore Army will need to emphasize on the importance of continual education and lifelong learning to the development of the military officer, and expand educational opportunities through the promotion of self-education, unit education program, and active participation in inter-ministry/agency work attachments and multinational exercises. To address the latter, the Singapore Army will need to first establish a singular doctrinal concept that defines what the military profession represents in the SAF context, while concurrently improving the education systems to develop the intellectual capacity and military ethics of the officers through the active management of the civilian education of the military officers, infusion of appropriate levels of broad liberal education at various stages of the military career, continual and high-level emphasis on critical and creative thinking and military ethics, and leveraging on partnerships with established institutions of higher learning to deliver the content for these subjects.

Given the centrality of fog and friction in full spectrum operations, this thesis argues that the Third Generation Singapore Army officers need to devote greater emphasis to their education in order to prepare themselves to operate in the contemporary security environment. As U.S. General Dwight D. Eisenhower once said, "There is no activity more important in a man's preparation for war than his periodic return to school duty, not so much because of what he learns in mere facts and knowledge . . . For that period he is given an opportunity to think, think in terms of war, without limit upon the scope of his ideas."[101]

Other Alternatives

While a redesigned training and education roadmap is important in preparing the Third Generation Singapore Army officers for the contemporary security environment, this thesis proposes three alternatives that can be further explored to enhance the leadership development of the Singapore Army officers.

Review of Retirement Age for Officers

First, the Singapore Army can review the mandatory retirement age for its officers. In 1998, the retirement age was lowered from fifty-five to forty-five in order to ensure a dynamic organization through the constant healthy renewal of leadership at all levels. However, the question remains whether dynamism and capability can be equated with age. After all, many Chief Executive Officers of established Multinational

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[101]Dwight D. Eisenhower Commission, "Command in War, National War College, October 30, 1950," http://www.eisenhowermemorial.org/speeches/19501030%20Command%20in%20War%20National%20War%20College.html (accessed 1 October 2009).

Corporations in the information technology sector--one that demands creativity and dynamism--serve past the age of forty-five. Steve Jobs, who is widely credited for turning around the fortunes of Apple Incorporated, is currently fifty-four, while Steve Ballmer currently leads Microsoft at the age of fifty-three.

Historically, there have been many outstanding generals who have served past the age of forty-five. General Dwight Eisenhower was fifty-four and General George Patton was three months shy of sixty when they led the storming of and advance from the beaches of Normandy in World War II. General Douglas MacArthur was sixty-four when he retook the Philippines from the Japanese in October 1944. More recently, General David Petraeus was fifty-one when he led the 101st Airborne Division in Iraq in 2003, and is fifty-seven now as Commander of the U.S. Central Command. It is also noteworthy that the U.S. military takes approximately twenty-five years to develop a Joint Task Force commander,[102] approximately the same length of the military career of the Singapore Army officers. Given that the demands on the Singapore Army officers has increased in the contemporary security environment, it is timely to review the self-imposed limitation as part of the overall construct of the military profession in the SAF context.

Raise the Quality of the Teaching Faculty

Second, the Singapore Army can raise the quality of the faculty in SAFTI MI and other training schools for the officers, especially those instructors who are employed at the advanced schools and the command and staff college. A high quality faculty is critical

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[102]Shelton, 7.

in educating high quality officers, as shown by the success of the *Führungsakademie* in the German Army.[103] It is also noteworthy that many U.S. combat leaders during World War II either taught or attended professional military schools, and often did both during the interwar period. George Patton and Omar Bradley both taught at Army schools in the 1930s, and were graduates of the Army War College.[104] Of the 34 corps commanders who led the U.S. Army to victory in World War II, 31 had taught in the Army school system, and were able to apply the professional knowledge that they had developed over years of teaching into the practical business of raising a force, training troops, and leading them successfully in combat.[105]

To raise the quality of the faculty in SAFTI MI, personnel policies will have to change. For example, officers who are widely acknowledged as the best and brightest must be assigned to the faculty to emphasize the importance of the education of future officers to the Singapore Army, as well as to demonstrate that the road to the top is not solely defined by high-powered command and staff assignments, but by a serious, constant, and balanced preparation for larger command and staff responsibilities in wartime.[106] These faculty positions should be viewed as "good" assignments, such that the officers who have performed well are still considered upwardly mobile and are able to go on to excellent follow-on assignments.

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[103]Grossman, 34-37.

[104]Shelton, 9.

[105]McCausland and Martin, 17-33.

[106]Grossman, 71-72.

Review the Selection Criteria for the Command and
Staff Course

Third, the Singapore Army can review the existing selection criteria for officers attending the command and staff course. The U.S. Army and the German Army offer two extreme models for consideration. The former suggests making the command and staff course mandatory and open to all officers to broaden the education of the officer corps, while the latter proposes the tightening of the selection criteria to enhance the competitiveness of the command and staff course. Both models offer their own advantages and disadvantages, and should be thoroughly considered before any changes are made to the existing system. A possible hybrid model is to divide the command and staff course into two parts: a basic curriculum which is mandatory and open to all officers, and an advanced curriculum for selected officers only.

In conclusion, leadership development is the key to maintaining the capability and credibility of the Singapore Army as an effective full spectrum force. Unlike civilian or commercial organizations, the Singapore Army has neither the option of scouring the market for the best talent to lead the force, nor enjoys the flexibility of leadership renewal through mid-stream recruitment. To borrow a common saying, the Singapore Army "reaps what it sows," and it is imperative to start young in order to sow the seeds of tomorrow. To do otherwise and neglect the need to make this investment will only seriously jeopardize the Singapore Army's ability to stay ready, relevant, and decisive across the full spectrum of operations in the contemporary security environment.

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